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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/814,144	04/01/2004	Mitsuaki Nakamura	1248-0711PUS1	7353
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EXAMINER WONG, XAVIER S				
ART UNIT 2616		PAPER NUMBER		
NOTIFICATION DATE 06/02/2008		DELIVERY MODE ELECTRONIC		

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

mailroom@bskb.com

Office Action Summary

Application No.

10/814,144

Applicant(s)

NAKAMURA, MITSUAKI

Examiner

Xavier Szewai Wong

Art Unit

2616

Period for Reply -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 21st December 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 2,3,5-7,9,11,12 and 14-17 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 2,3,5-7,9,11,12 and 14-17 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB08)
- Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
- Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Claims **2, 3, 5 – 7, 9, 11, 12** and **14 – 17** are pending

This is a Final action

Specification

1. The disclosure is objected to because of the following informalities: pg. 40 line 12: iii) the new ~~mater~~ → master. Appropriate correction is required.

Claim Objections

2. Claim **17** is objected to because of the following informalities: pg. 9 line 5: synchronization information ~~frameef~~ → frame of. Appropriate correction is required.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

1. Claims **2, 3, 5, 6, 9, 11, 12, 14, 15** and **17** are rejected under 35 U.S.C. 102(e) as being anticipated by **Maeshima et al (US 2002/0032025 A1)**.

Claims **2, 11, 14, 15** and **17: Maeshima et al** disclose a network terminal, comprising computer readable medium with stored instruction sets, constituting a network system which is made up of a plurality of network terminals being capable of transmitting and receiving data and manages transmitting and receiving of data in

accordance with a synchronization information frame periodically supplied from one of said plurality of network terminals which operates as a master terminal (fig. 2; [0078, 0081]), said network terminal comprising means for: synchronization information frame receiving section receiving the synchronization information frame from the master terminal ([0041] interface sections); network information managing section for managing the network by being synchronized with the synchronization information frame received by the synchronization information frame receiving section ([0041] transmission control management section); synchronization information frame missing detection section for detecting a missing of the synchronization information frame from said master terminal, when the synchronization information frame receiving section does not receive the synchronization information frame ([0079] signal from the master control station cannot be received; fig. 16 S36-37); a management information storing section (e.g. priority list) for storing a priority list which defines a start time of transmission of the synchronization information frame of each of said plurality of network terminals, each of said plurality of network terminals having a different priority ([0040], [0062], [0093] and fig. 17 wherein priorities correlate to start times); synchronization information frame transmitting section starting to output the synchronization information frame after the synchronization information frame missing detection section detects the missing of the synchronization information frame ([0078, 0080]); after the synchronization information frame missing detection section detects the missing of the synchronization information frame, the synchronization information frame receiving section waits for a synchronization information frame from one of said plurality of network terminals whose start time is

earlier than the start time of said network terminal, until the start time of said network terminal comes ([0080]); synchronization information frame transmitting section for, in a case where said network terminal acts as a new master terminal of the network system, periodically outputting a synchronization information frame including at least a part of information in the synchronization information frame received from said master terminal ([0078-79, 0081]), from the start time defined by the priority list stored in the priority list storing section ([0080]; fig. 17); priority list generating section determining an updated priority list including an updated priority corresponding to each of said plurality of network terminals of the network system ([0083]), and transmitting the priority list to said plurality of network terminals, when said network terminal acts as a master terminal ([0108]).

Claims 3 and 12, applied to claims 2 and 11: **Maeshima** et al further disclose the synchronization information frame transmission start time information indicates priorities of said plurality of network terminals of the network system, for selecting a master terminal – control station candidate ([0093]; fig. 17).

Claim 5, applied to claim 2: **Maeshima** et al further disclose the synchronization information frame transmission start time information generating means determines the sets of synchronization information frame transmission start time information, on ground of capabilities of said plurality of network terminals as a master terminal (e.g. based on stand-by times, start times and priorities) of the network system ([0062], [0093]).

Claim 6, applied to claim 2: **Maeshima** et al further disclose the synchronization information frame transmission start time information generating means determines the

sets of synchronization information frame transmission start time information, on ground of priorities of sets of data transmitted from said plurality of network terminals ([0093], stand-by and start times transmitting from plurality of slave stations).

Claim 9, applied to claim 2: **Maeshima** et al further disclose if it is impossible to generate a synchronization information frame including all sets of information in the synchronization information frame received from said master terminal ([0062,0068]), the synchronization information frame transmission means determines which sets of information is included in a synchronization information frame, in accordance with priorities of sets of data exchanged between said plurality of network terminals ([0073]; figs. 11-13 exchanging data).

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

4. Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over **Maeshima et al (US 2002/0032025 A1)** in view of **Vitebsky (US 2004/0203822 A1)**.

Claim 7, applied to claim 2: **Maeshima et al** disclose the claimed invention yet not specifically mentioned the synchronization information frame transmitting means determines the synchronization information frame transmission start time, on ground of a time calculated by multiplying said priorities by a predetermined unit time. **Vitebsky** discloses priority values PVs are modified by multiplying the priority values by a predetermined factor $G(R(n,i))$, which is a function of average service rate $([0030,32,37 \& 38])$. It would have been obvious to one of ordinary skill in the art at the time the invention was created to implement the multiplication function for determining priorities among terminals as taught by **Vitebsky** to the system of **Maeshima et al** to control data throughput.

Claim 16 is rejected under 35 U.S.C. 103(a) as being unpatentable over **Maeshima et al (US 2002/0032025 A1)** in view of **Kainulainen (US 5,878,095)** and in further view of **Furukawa et al (US 2004/0010605 A1)**.

Claim 16, applied to claim 2: **Maeshima et al** disclose the claimed invention except do not specifically mention the synchronization information frame includes at least one of a network identifier for identifying the network system, a master terminal inherent number for identifying a sender of the synchronization information frame, a synchronization information frame interval indicating when the next synchronization information frame is sent, and band guarantee period information for specifying network terminals which can transmit information to another network terminal and for

guaranteeing a transmission band. **Kainulainen** discloses synchronization signatures identifying the sender of the synchronization signature (col. 6 ln. 26-45); and a decision means and timer means to indicate a period (interval) new synchronization signature is to be sent (col. 7 ln. 36-65; col. 8 ln. 2-23). It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the sender identifying and interval indicating steps of **Kainulainen** to the system of **Maeshima et al** to monitor synchronization signatures in change-overs. However, neither **Maeshima et al** nor **Kainulainen** disclose band guarantee period information for specifying network terminals which can transmit information to another network terminal and for guaranteeing a transmission band. **Furukawa et al** teach a band guarantee specification block that transmits band guarantee requirement information to other host terminals based on priorities ([0035-37]). It would have been obvious to one of ordinary skill in the art at the time the invention was made to implement the band guarantee information of **Furukawa et al** to the frames of **Maeshima**, as modified by **Kainulainen**, for guaranteeing transmission band.

Response to Arguments

5. Applicant's arguments with respect to claims **2, 11, 14, 15** and **17** have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

7. **Kasurinen (US 6,317,475 B1)** discloses at least one master clock is used as a synchronization source for the network nodes, and the synchronization network is established by selecting, in accordance with a topology defined by the links, synchronization chains formed by successive nodes, through which chains the signal of at least said main clock is distributed to the nodes in the chain, and by defining for the different nodes in the chain a node-specific priority list including node interfaces at different priority levels, determining the synchronization source to be selected by the node when signals of equal quality levels are received on the node connections
8. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, this action is made Final. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Xavier Wong whose telephone number is (571)270-

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1780. The examiner can normally be reached on Monday through Friday 8:30 am - 6:00 pm (EST).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Seema Rao can be reached on 571-272-3174. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Seema S. Rao/
Supervisory Patent Examiner, Art
Unit 2616

Xavier Szewai Wong
X.S.W / x.s.w
19th May 2008